



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,034	10/16/2003	Pengfei Ma	02-283	9103

719 7590 11/16/2004

CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

HANAN, DEVIN J

ART UNIT PAPER NUMBER

3745

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/687,034	Applicant(s) MA, PENGFEI	
	Examiner Devin Hanan	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 10/16/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/16/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 6, 7, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Morishita (U.S. Patent 5,513,551).

Morishita discloses a swing cushion system of a work machine, comprising: a directional flow device (19) having a directional control member (19), a control device (27) coupled to said directional flow device (19); and wherein said control device (27) outputs a signal to said fluid flow-control apparatus (19) to shift said directional control member (19) to dissipate energy in the fluid.

Regarding claim 5, Morishita discloses the control device is a programmable electronic control module (27).

Regarding claim 6, Morishita discloses using a signal that has at least one variable pre-determined parameter, said at least one variable pre-determined parameter (figure 7) is of a magnitude parameter, and said programmable electronic control module includes an algorithm (figure 8,9) for calculating said at least one variable pre-determined parameter.

Art Unit: 3745

Regarding claim 7, Morishita discloses a method for dissipating energy in a swing cushion system of a work machine, the system including a directional flow device (19) having a directional control member (19), and a control device (27) coupled to said directional flow device (19), comprising the steps of:

producing a stop swing command (figure 9, S11);
generating a signal indicative of variable pre-determined parameters (figure 5);
dissipating energy in said swing cushion system using said signal (figure 5).

Regarding claim 8, Morishita discloses the step of sending said signal to said directional flow device (column 4 lines 21-28).

Regarding claim 9, Morishita discloses the step of oscillating said directional control member to dissipate energy in said swing cushion system in response to said signal (figure 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 4 and 10 are rejected under U.S.C. 103(a) as being unpatentable over Morishita as applied to claims 1 and 7 above, and further in view of Deaton et al. (U.S. Patent 6,433,991).

Morishita as applied to claim 1 above teaches all of the above claimed elements with the exception that they do not teach of the signal being a sinusoidal signal.

However, Deaton et al. teaches of the use of a sinusoidal signal to control a directional control device (column 4 lines 24-25).

Regarding claims 3 and 4, Morishita discloses of using at least one variable predetermined parameter of: a time parameter, a magnitude parameter, and a frequency parameter (column 1 lines 54-55).

Regarding claim 10, Morishita teaches of the use of a predetermined parameter indicative of the position of the directional control member and of a change rate of said swing command.

Morishita as applied to claim 7 above teaches all of the above claimed elements with the exception that they do not teach of a sinusoidal signal indicative of said change rate.

However, Deaton et al. teaches of using a sinusoidal signal indicative of said change rate (column 4 lines 24-25).

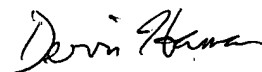
It would have been obvious to one of ordinary skill in the art at the time the invention was made to signal the directional control devices of Morishita using sinusoidal signals as learned from the Deaton et al. reference.

Conclusion

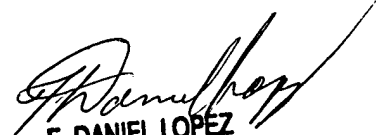
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devin Hanan whose telephone number is 703-305-0863. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on 703-308-1044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Devin Hanan
Patent Examiner
Art Unit 3745



F. DANIEL LOPEZ
PRIMARY EXAMINER